In the Claims:

1. (Currently Amended) A method for communicating over a network protocol stack in a network, the method comprising:

creating a packet through an application, the packet being a self-contained, independent entity of data including header information for routing the packet to from a source to a destination, the header information being associated with a layer in a multiple layer network protocol stack;

selecting a layer in the multiple layer network protocol stack for communicating with the application;

establishing an inner layer socket for communication between the application and the selected layer using an inner layer application programming interface (IL API), wherein the communication between the application and the selected layer bypasses other layers in the multiple layer network protocol stack; and

transmitting the packet including the header information from the application to the selected layer through the inner layer socket;

wherein the application communicates with the IL API using object-oriented instructions and the IL API interfaces with the multiple layer network protocol stack through instructions executable on a virtual-machine compatible with the multiple layer network protocol stack.

2. (Previously Presented) The method of claim 1, wherein the header information includes header information associated with a transport layer and the inner layer socket is a transport socket.

3. (Previously Presented) The method of claim 2, wherein the multiple layer network protocol stack is compatible with TCP/IP and the transport socket is compatible with a TCP or UDP transport layer protocol.

4. (Previously Presented) The method of claim 1, wherein the header information includes header information associated with a network layer and the inner layer socket is a network socket.

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5. (Previously Presented) The method of claim 4, wherein the multiple layer network protocol stack is compatible with TCP/IP and the network socket is compatible with an IP network layer protocol.

6. (Previously Presented) The method of claim 1, wherein the header information includes header information associated with a link layer and the inner layer socket is a link socket.

7. (Previously Presented) The method of claim 6, wherein the multiple layer network protocol stack is compatible with TCP/IP and the link socket is compatible with a link layer protocol.

8. (Previously Presented) The method of claim 1, wherein selecting a layer in the multiple layer network protocol stack further includes selecting the layer in the multiple layer network protocol stack based on a type of the packet created by the application.

9 -11. (Canceled).

12. (Previously Presented) The method of claim 1, wherein the IL API further provides a transport socket to access transport layer information in the multiple layer network protocol stack, a network socket to access network layer information in the multiple layer network protocol stack, a link socket to access link layer information in the multiple layer network protocol stack, and a physical socket to access physical port information in the multiple layer network protocol stack.

13. (Previously Presented) The method of claim 1, wherein the IL API further provides a different socket communication interface for each layer of communication available in the multiple layer network protocol stack.

14. (Currently Amended) The method of claim 1, wherein the application communicates with the IL API using object-oriented instructions and the IL API interfaces with the multiple layer network protocol stack through instructions executable on a virtual machine compatible with the multiple layer network protocol stack 15, wherein the application contains source code that generates and utilizes Java link layer sockets.

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15. (Currently Amended) The method of claim [[13]] 1, wherein the object-oriented instructions are compatible with a [[the]] Java programming language.

16. (Currently Amended) An apparatus for communicating over a network protocol stack in a network, the apparatus comprising:

a processor;

a memory for storing instructions when executed on the processor that causes the processor to,

create a packet through an application, the packet being a self-contained, independent entity of data including header information for routing the packet from a source to a destination, the header information being associated with a layer in a multiple layer network protocol stack;

select a layer in the multiple layer network protocol stack for communicating with the application;

establish an inner layer socket for communication between the application and the selected layer using an inner layer application programming interface (IL API), wherein the IL API is distinct from the application, and wherein the communication between the application and the selected layer bypasses other layers in the multiple layer network protocol stack; and

transmit the packet including the header information from the application to the selected layer through the inner layer socket.

17. (Previously Presented) The apparatus of claim 16, wherein the header information includes header information associated with a transport layer and the inner layer socket is a transport socket.

18. (Previously Presented) The apparatus of claim 17, wherein the multiple layer network protocol stack is compatible with TCP/IP and the transport socket is compatible with a TCP or UDP transport layer protocol.

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19. (Previously Presented) The apparatus of claim 16, wherein the header information includes header information associated with a network layer and the inner layer socket is a network socket.

20. (Previously Presented) The apparatus of claim 19, wherein the multiple layer network protocol stack is compatible with TCP/IP and the network socket is compatible with an IP network layer protocol.

21. (Previously Presented) The apparatus of claim 16, wherein the header information includes header information associated with a link layer and the inner layer socket is a link socket.

22. (Previously Presented) The apparatus of claim 21, wherein the multiple layer network protocol stack is compatible with TCP/IP and the link socket is compatible with a link layer protocol.

23. (Currently Amended) The apparatus of claim 16, wherein the instructions to cause a processor to select a layer in a network protocol stack further includes instructions to cause the [[a]] processor to select the layer in the network protocol stack based on a type of the packet created by the application.

24-26. (Canceled).

27. (Previously Presented) The apparatus of claim 16, wherein the IL API further provides a transport socket to access transport layer information in the multiple layer network protocol stack, a network socket to access network layer information in the multiple layer network protocol stack, a link socket to access link layer information in the multiple layer network protocol stack, and a physical socket to access physical port information in the multiple layer network protocol stack.

28. (Previously Presented) The apparatus of claim 16, wherein the IL API further provides a different socket communication interface for each layer of communication available in the multiple layer network protocol stack.

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29. (Previously Presented) The apparatus of claim 16, wherein the application communicates with the IL API using object-oriented instructions and the IL API interfaces with the multiple layer network protocol stack through instructions executable on a virtual-machine compatible with the multiple layer network protocol stack.

30. (Currently Amended) The apparatus of claim 29, wherein the object-oriented instructions are compatible with a [[the]] Java programming language.

31. (Currently Amended) An apparatus for accessing information about a resource associated with a network device, comprising:

       means for creating a packet through an application, the packet being a self-contained, independent entity of data including header information for routing the packet from a source to a destination, the header information being associated with a layer in a multiple layer network protocol stack;

       means for selecting a layer in the multiple layer network protocol stack for communication with the application;

       means for establishing an inner layer socket for communication between the application and the selected layer using an inner layer application programming interface (IL API), wherein the IL API is distinct from the application, and wherein the communication between the application and the selected layer bypasses other layers in the multiple layer network protocol stack; and

       means for transmitting the packet including the header information from the application to the selected layer through the inner layer socket.

32. (Currently Amended) A computer program, tangibly stored on a computer-readable medium, comprising instructions for communicating over a network protocol stack in a network, the computer program comprising instructions to:

       create a packet through an application, the packet being a self-contained, independent entity of data including header information for routing the packet from a source to a destination, the header information being associated with a layer in a multiple layer network protocol stack;

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select a layer in the multiple layer network protocol stack for communicating with the application;

establish an inner layer socket for communication between the application and the selected layer using an inner layer application programming interface (IL API), wherein the IL API is distinct from the application, and wherein the communication between the application and the selected layer bypasses other layers in the multiple layer network protocol stack; and

transmit the packet including the header information from the application to the selected layer through the inner layer socket.

33. (Previously Presented) The method of claim 1, further comprising transmitting the packet from the source to the destination over the network based on the header information in the packet.

34. (Previously Presented) The method of claim 33, wherein the header information includes header information for routing the packet from a source computer to a destination computer.

35. (Previously Presented) The apparatus of claim 16, wherein the instructions further includes instructions to cause the processor to transmit the packet from the source to the destination over the network based on the header information in the packet.

36. (Previously Presented) The apparatus of claim 35, wherein the header information includes header information for routing the packet from a source computer to a destination computer.

37. (Currently Amended) The apparatus of claim 31, further comprising means for transmitting the packet from the source to the destination over a [[the]] network based on the header information in the packet.

38. (Previously Presented) The computer program of claim 32, further comprising instructions to transmit the packet from the source to the destination over the network based on the header information in the packet.

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